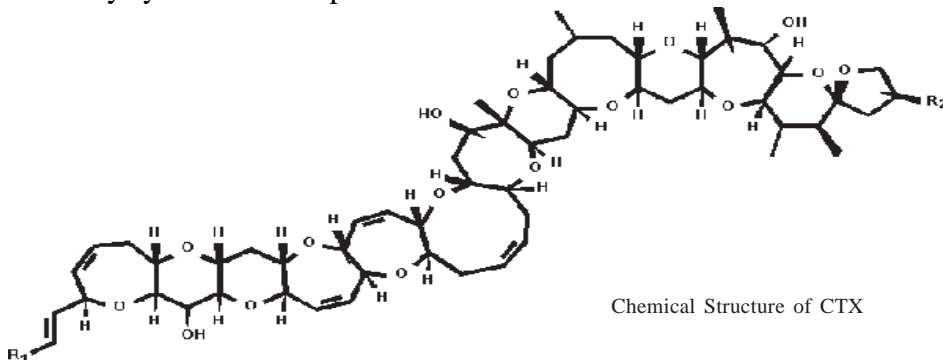


Species Distribution: *Gambierdiscus toxicus*, is a dinoflagellate found in the coastal waters off the Gulf of Mexico and Caribbean as well as in other tropical and subtropical coral reef regions worldwide.

Toxins/Mode of Action: Ciguatoxin (CTX) and Maitotoxin (MTX)

Ciguatoxin (CTX), activates voltage dependent sodium channels (VDSC) and Maitotoxin (MTX), activates voltage dependent calcium channels (VDCC) indirectly by membrane depolarization.



Human Health Syndrome: Ciguatera Fish Poisoning (CFP)

Ciguatera fish poisoning (CFP) produces gastrointestinal, neurological, and cardiovascular symptoms which usually begin developing within 12 to 24 hours of eating contaminated fish. Initially, gastrointestinal symptoms of diarrhea, abdominal pain, nausea, and vomiting occur, followed by neurological symptoms of numbness and tingling of hands and feet, dizziness, altered hot/cold perception, muscle aches, and low heart rates and blood pressure. In extreme cases, death occurs through respiratory failure.

Other Species Associated with CFP:

- *Amphidinium carterae*
- *Coolia monotis*
- *Ostereopsis siamensis*
- *Prorocentrum lima*

Syndrome Distribution: People are affected by CFP throughout the globe because of travel to the tropics as well as the shipment of tropical fish to markets worldwide. In the Caribbean region gastrointestinal symptoms dominate cases of CFP, where as in the Pacific region neurological symptoms dominate. CFP is thought to be the most under reported human health syndrome with estimates of 30,000 people affected per year.